U.S. DEPARTMENT OF COMMERCE
National Technical Information Service

PB-260 334

WATER USE CLASSIFICATIONS AND RELATED WATER QUALITY GOALS APPLICABLE TO THE SURFACE WATERS OF THE JUNIATA RIVER BASIN AS ADOPTED BY THE CHESAPEAKE BAY-SUSQUEHANNA RIVER BASINS PROJECT

FEDERAL WATER POLLUTION CONTROL ADMINISTRATION
ANNAPOLIS, MARYLAND

AUGUST 1965

PB 260 334

173207

WATER USE CLASSIFICATIONS AND RELATED WATER QUALITY GOALS APPLICABLE TO THE SURFACE WATERS OF THE JUNIATA RIVER BASIN AS ADOPTED BY THE CHESAPEAKE BAY-SUSQUEHANNA RIVER BASINS PROJECT

August 1965

REPRODUCED BY
NATIONAL TECHNICAL
INFORMATION SERVICE
U. S. DEPARTMENT OF COMMERCE
SPRINGFIELD, VA. 22161

BIBLIOGRAPHIC DATA SHEET	1. Report No.	2.	3. Recipient's Accession No. PB-260 334
4. Title and Subtitle Water Use Classifications and Related Water Quality Goals Applicable to the Surface Waters of the Juniata River Basin as Adopted by the Chesapeake Bay-Susquehanna River Basins Project.			5. Report Date Aug 65 6.
7. Author(s)			8. Performing Organization Rept. No.
9. Performing Organization Name and Address Federal Water Pollution Control Administration, Annapolis, Md. Chesapeake Bay-Susquehanna River Basin Project.			10. Project/Task/Work Unit No. 11. Contract/Grant No.
12. Sponsoring Organization Name and Address			13. Type of Report & Period Covered 14.

15. Supplementary Notes

16. Abstracts Water use classifications and water quality goals are presented for the Juniata River Basin in Pennsylvania, including the Juniata and Little Juniata Rivers, Frankstown Branch, and Raystown Branch. Water quality goals provide data on dissolved oxygen, iron, pH, temperature, manganese, and coliform bacteria.

17. Key Words and Document Analysis. 17a. Descriptors

17b. Identifiers/Open-Ended Terms

Juniata River Basin
Pennsylvania
River basins
Water resources
*Water analysis
*Water quality data
Water temperature
pH factor

17c. COSATI Field/Group 13B

18. Availability Statement	19. Security Class (This Report) UNCLASSIFIED	21. No. of Pages 11
	20. Security Class (This Page UNCLASSIFIED	22. Price

JUNIATA RIVER BASIN

LITTLE JUNIATA RIVER

Little Juniata River upstream from Tyrone, Pennsylvania

Little Juniata River upstream from Tyrone, Pa.

A. Water Use Classifications
   1. Fish and aquatic life *
   2. Treated waste assimilation and transport

B. Water Quality Goals

1.	D.O., mg/l	5.0 (min.)
2.	Iron, mg/l	0.3 (max.)
3.	pH	6.5 to 8.5
4.	Temperature, °C	34 (max.)

Streams tributary to the Little Juniata River upstream from Tyrone, Pa.

A. Water Use Classifications
   1. Water oriented recreation
   2. Municipal water supply
   3. Cold water fish and aquatic life *

B. Water Quality Goals

1.	Coliform bacteria, MPN/100 ml	1000 (max.) **
2.	D.O., mg/l	5.0 (min.)
3.	Iron, mg/l	0.3 (max.)
4.	Manganese, mg/l	0.05 (max.)
5.	pH	6.8 to 8.5
6.	Temperature, °C	14.5 (max.)

Little Juniata River downstream from Tyrone, Pennsylvania

Little Juniata River downstream from Tyrone, Pa.

A. Water Use Classifications
   1. Fish and aquatic life *
   2. Treated waste assimilation and transport

B. Water Quality Goals

1.	D.O., mg/l	5.0 (min.)
2.	Iron, mg/l	0.3 (max.)
3.	pH	6.5 to 8.5
4.	Temperature, °C	34 (max.)

South (Little) Bald Eagle Creek

A. Water Use Classifications
   1. Water oriented recreation
   2. Municipal and Industrial (Pulp and Paper Mfg.) Water Supply
   3. Cold water fish and aquatic life *

B. Water Quality Goals

1.	Coliform bacteria, MPN/100 ml	1000 (max.) **
2.	D.O., mg/l	5.0 (min.)
3.	Iron, mg/l	0.3 (max.)
4.	Manganese, mg/l	0.05 (max.)
5.	pH	6.5 to 8.5
6.	Temperature, °C	14.5 (max.) ***

Spruce Creek

A. Water Use Classifications
   1. Water oriented recreation
   2. Cold water fish and aquatic life *

B. Water Quality Goals

1.	Coliform bacteria, MPN/100 ml	1000 (max.) **
2.	D. O., mg/l	5.0 (min.)
3.	Iron, mg/l	0.3 (max.)
4.	pH	6.5 to 8.5
5.	Temperature, °C	14.5 (max.) ***

FRANKSTOWN BRANCH JUNIATA RIVER

Frankstown Branch upstream from Hollidaysburg, Pennsylvania

Halter Creek upstream from Roaring Spring, Pa.

A. Water Use Classifications
   1. Water oriented recreation
   2. Municipal and Industrial (Pulp and Paper Mfg.) Water Supply
   3. Cold water fish and aquatic life *

B. Water Quality Goals

1.	Coliform bacteria, MPN/100 ml	1000 (max.) **
2.	D.O. mg/l	5.0 (min.)
3.	Iron, mg/l	0.3 (max.)
4.	Manganese, mg/l	0.05 (max.)
5.	pH	6.5 to 8.5
6.	Temperature, °C	14.5 (max.)

Halter Creek downstream from Hollidaysburg, Pennsylvania

A. Water Use Classifications
   1. Fish and aquatic life *
   2. Treated waste assimilation and transport

B. Water Quality Goals

1.	D.O., mg/l	5.0 (min.)
2.	Iron, mg/l	0.3 (max.)
3.	pH	6.5 to 8.5
4.	Temperature, °C	34 (max.)

Frankstown Branch upstream from Halter Creek

A. Water Use Classifications
   1. Water oriented recreation
   2. Municipal water supply
   3. Fish and aquatic life *

B. Water Quality Goals

1.	Coliform bacteria, MPN/100 ml	1000 (max.) **
2.	D.O., mg/l	5.0 (min.)
3.	Iron, mg/l	0.3 (max.)
4.	Manganese, mg/l	0.05 (max.)
5.	pH	6.5 to 8.5
6.	Temperature, °C	34 (max.)

Frankstown Branch downstream from Halter Creek

A. Water Use Classifications
   1. Fish and aquatic life *
   2. Treated waste assimilation

B. Water Quality Goals

1. D.O., mg/l	5.0 (min.)
2. Iron, mg/l	0.3 (max.)
3. pH	6.5 to 8.5
4. Temperature, °C	34 (max.)

Other streams tributary to Frankstown Branch upstream from Hollidaysburg, Pa.

A. Water Use Classifications
   1. Water oriented recreation
   2. Municipal water supply
   3. Fish and aquatic life *

B. Water Quality Goals

1. Coliform bacteria, MPN/100 ml	1000 (max.) **
2. D.O., mg/l	5.0 (min.)
3. Iron, mg/l	0.3 (max.)
4. Manganese, mg/l	0.05 (max.)
5. pH	6.5 to 8.5
6. Temperature, °C	34 (max.)

<u>Frankstown Branch downstream from Hollidaysburg, Pennsylvania</u>

Beaverdam Branch upstream from Altoona, Pa.

A. Water Use Classifications
   1. Municipal water supply
   2. Cold water fish and aquatic life *

B. Water Quality Goals

1. Coliform bacteria, MPN/100 ml	5000 (max.) **
2. D.O., mg/l	5.0 (min.)
3. Iron, mg/l	0.3 (max.)
4. Manganese, mg/l	0.05 (max.)
5. pH	6.5 to 8.5
6. Temperature, °C	14.5 (max.) ***

Beaverdam Branch downstream from Altoona, Pa.

A. Water Use Classifications
   1. Fish and aquatic life *
   2. Treated waste assimilation and transport

B. Water Quality Goals

1. D.O., mg/l	5.0 (min.)
2. Iron, mg/l	0.3 (max.)
3. pH	6.5 to 8.5
4. Temperature, °C	34 (max.)

Canoe Creek

A. Water Use Classifications
   1. Cold water fish and aquatic life *
   2. Wildlife propagation

B. Water Quality Goals

1.	D.O., mg/l	5.0 (min.)
2.	Iron, mg/l	0.3 (max.)
3.	pH	6.5 to 8.5
4.	Temperature, °C	14.5 (max.) ***

Frankstown Branch downstream from Hollidaysburg, Pa.

A. Water Use Classifications
   1. Fish and aquatic life *
   2. Treated waste assimilation and transport

B. Water Quality Goals

1.	D.O., mg/l	5.0 (min.)
2.	Iron, mg/l	0.3 (max.)
3.	pH	6.5 to 8.5
4.	Temperature, °C	34 (max.)

RAYSTOWN BRANCH JUNIATA RIVER

Raystown Branch upstream from Bedford, Pennsylvania

Raystown Branch upstream from Bedford, Pa.

A. Water Use Classifications
   1. Water oriented recreation
   2. Municipal water supply
   3. Fish and aquatic life *

B. Water Quality Goals

1.	Coliform bacteria, MPN/100 ml	1000 (max.)
2.	D.O., mg/l	5.0 (min.)
3.	Iron, mg/l	0.3 (max.)
4.	Manganese, mg/l	0.05 (max.)
5.	pH	6.5 to 8.5
6.	Temperature, °C	34 (max.)

Raystown Branch between Bedford and Saxton, Pennsylvania

Raystown Branch between Bedford and Hopewell, Pa.

A. Water Use Classifications
   1. Fish and aquatic life *
   2. Treated waste assimilation and transport

B. Water Quality Goals

1.	D.O., mg/l	5.0 (min.)
2.	Iron, mg/l	0.3 (max.)
3.	pH	6.5 to 8.5
4.	Temperature, °C	34 (max.)

Raystown Branch between Hopewell and Saxton, Pa.

A. Water Use Classifications
   1. Municipal water supply
   2. Fish and aquatic life *

B. Water Quality Goals

1.	Coliform bacteria, MPN/100 ml	5000 (max.) **
2.	D.O., mg/l	5.0 (min.)
3.	Iron, mg/l	0.3 (max.)
4.	Manganese, mg/l	0.05 (max.)
5.	pH	6.5 to 8.5
6.	Temperature, °C	34 (max.)

Other streams tributary to Raystown Branch between Bedford and Saxton, Pa.

A. Water Use Classification
   1. Fish and aquatic life *

B. Water Quality Goals

1.	D.O., mg/l	5.0 (min.)
2.	Iron, mg/l	0.3 (max.)
3.	pH	6.5 to 8.5
4.	Temperature, °C	34 (max.)

Raystown Branch downstream from Saxton, Pennsylvania

Raystown Branch and its tributaries downstream from Saxton, Pa.

A. Water Use Classifications
   1. Water oriented recreation
   2. Municipal water supply
   3. Fish and aquatic life *
   4. Treated waste assimilation and transport

B. Water Quality Goals

1.	Coliform bacteria, MPN/100 ml	1000 (max.) **
2.	D.O., mg/l	5.0 (min.)
3.	Iron, mg/l	0.3 (max.)
4.	Manganese, mg/l	0.05 (max.)
5.	pH	6.5 to 8.5
6.	Temperature, °C	34 (max.)

JUNIATA RIVER

Juniata River upstream from Lewistown, Pennsylvania

Juniata River upstream from Newton-Hamilton, Pa.

A. Water Use Classifications
   1. Fish and aquatic life *
   2. Treated waste assimilation and transport

B. Water Quality Goals

1.	D.O., mg/l	5.0 (min.)
2.	Iron, mg/l	0.3 (max.)
3.	pH	6.5 to 8.5
4.	Temperature, °C	34 (max.)

Juniata River between Newton-Hamilton and Lewistown, Pa.

A. Water Use Classifications
   1. Water oriented recreation
   2. Municipal and Industrial (Synthetic Fiber Mfg.) Water Supply
   3. Fish and aquatic life *

B. Water Quality Goals

1.	Coliform bacteria, MPN/100 ml	1000 (max.) **
2.	D.O., mg/l	5.0 (min.)
3.	Iron, mg/l	0.3 (max.)
4.	Manganese, mg/l	0.05 (max.)
5.	pH	7.0 to 8.5
6.	Temperature, °C	34 (max.)

Standing Stone Creek, Scrubs Run, Dark Hollow Run, West Licking Creek, and Singers Gap Run

A. Water Use Classifications
   1. Municipal water supply
   2. Cold water fish and aquatic life *

B. Water Quality Goals

1.	Coliform bacteria, MPN/100 ml	5000 (max.) **
2.	D.O., mg/l	5.0 (min.)
3.	Iron, mg/l	0.3 (max.)
4.	Manganese, mg/l	0.05 (max.)
5.	pH	6.5 to 8.5
6.	Temperature, °C	14.5 (max.) ***

Shaver Creek, Crooked Creek, North and South Branches of Little Aughwick Creek, and Back Log Creek

A. Water Use Classification
   1. Cold water fish and aquatic life *

B. Water Quality Goals

1.	D.O., mg/l	5.0 (min.)
2.	Iron, mg/l	0.3 (max.)
3.	pH	6.5 to 8.5
4.	Temperature, °C	14.5 (max.) ***

Aughwick Creek and other Juniata tributaries not named herein

A. Water Use Classification
   1. Fish and aquatic life *

B. Water Quality Goals

1.	D.O., mg/l	5.0 (min.)
2.	Iron, mg/l	0.3 (max.)
3.	pH	6.5 to 8.5
4.	Temperature, °C	34 (max.)

<u>Kishacoquillas Creek</u>

Kishacoquillas Creek upstream from Belleville, Pa.

A. Water Use Classifications
   1. Water oriented recreation
   2. Cold water fish and aquatic life *

B. Water Quality Goals

1.	Coliform bacteria, MPN/100 ml	1000 (max.) **
2.	D.O., mg/l	5.0 (min.)
3.	Iron, mg/l	0.3 (max.)
4.	pH	6.5 to 8.5
5.	Temperature, °C	14.5 (max.) ***

Kishacoquillas Creek downstream from Belleville, Pa.

A. Water Use Classifications
   1. Industrial (Steel Mfg.) Water Supply
   2. Fish and aquatic life *
   3. Treated waste assimilation and transport

B. Water Quality Goals

1. D.O., mg/l	5.0 (min.)
2. Iron, mg/l	0.3 (max.)
3. Manganese, mg/l	0.2 (max.)
4. pH	6.5 to 8.5
5. Temperature, °C	34 (max.)

Honey Creek, Laurel Run, and other tributaries of Kishacoquillas Creek not named herein

A. Water Use Classifications
   1. Water oriented recreation
   2. Municipal and industrial water supply
   3. Cold water fish and aquatic life *

B. Water Quality Goals

1. Coliform bacteria, MPN/100 ml	1000 (max.) **
2. D.O., mg/l	5.0 (min.)
3. Iron, mg/l	0.3 (max.)
4. Manganese, mg/l	0.05 (max.)
5. pH	6.5 to 8.5
6. Temperature, °C	14.5 (max.) ***

<u>Juniata River downstream from Lewistown, Pennsylvania</u>

Juniata River between Lewistown and Mifflintown, Pa.

A. Water Use Classifications
   1. Fish and aquatic life *
   2. Treated waste assimilation and transport

B. Water Quality Goals

1. D.O., mg/l	5.0 (min.)
2. Iron, mg/l	0.3 (max.)
3. pH	6.5 to 8.5
4. Temperature, °C	34 (max.)

Juniata River between Mifflintown and Newport, Pa.

A. Water Use Classifications
   1. Water oriented recreation
   2. Municipal water supply
   3. Fish and aquatic life *

B. Water Quality Goals

1. Coliform bacteria, MPN/100 ml	1000 (max.) **
2. D.O., mg/l	5.0 (min.)
3. Iron, mg/l	0.3 (max.)
4. Manganese, mg/l	0.05 (max.)
5. pH	6.5 to 8.5
6. Temperature, °C	34 (max.) ***

Juniata River downstream from Newport, Pa.

A. Water Use Classifications
   1. Fish and aquatic life *
   2. Treated waste assimilation and transport

B. Water Quality Goals

1.	D.O., mg/l	5.0 (min.)
2.	Iron, mg/l	0.3 (max.)
3.	pH	6.5 to 8.5
4.	Temperature, °C	34 (max.)

East Licking Creek

A. Water Use Classifications
   1. Municipal water supply
   2. Cold water fish and aquatic life *

B. Water Quality Goals

1.	Coliform bacteria, MPN/100 ml	5000 (max.) **
2.	D.O., mg/l	5.0 (min.)
3.	Iron, mg/l	0.3 (max.)
4.	Manganese, mg/l	0.05 (max.)
5.	pH	6.5 to 8.5
6.	Temperature, °C	

Lost Creek, Tuscarora Creek, Big Buffalo Creek, Racoon Creek, Delaware Creek, and other Juniata River tributaries not named herein

A. Water Use Classification
   1. Cold water fish and aquatic life *

B. Water Quality Goals

1.	D.O., mg/l	5.0 (min.)
2.	Iron, mg/l	0.3 (max.)
3.	pH	6.5 to 8.5
4.	Temperature, °C	14.5 (max.) ***

* A complete list of Pennsylvania fishes would include approximately 200 separate species. Such a list is well beyond the scope of this paper. The list shown below was selected as being representative of the most commonly encountered game fishes in the Juniata River Basin.

  Cold water fishes include Brook, Brown and Rainbow Trout.

  Warm water fishes include Largemouth Bass, Smallmouth Bass, Black Crappie, Rock Bass, Yellow Perch, Bluegill, Pumpkinseed, Brown Bullhead, White Sucker, Fallfish, Carp, Walleye, Pickerel, Channel Catfish and Eels.

** Counts of coliform bacteria are applicable unless sanitary supervision discloses immediate danger from municipal, industrial, or other wastes.

*** In waters now providing a suitable cold water fish habitat, 14.5°C or the natural stream temperature, whichever is the higher.

References

1. McKee, J. E. and Wolf, H. W., Water Quality Criteria, 2nd Ed., California State Water Quality Control Board, Pub. 3-A, 1963, 548 p.

2. Pennsylvania Fishes, Pennsylvania Fish Commission, 32 p.

3. Fishing and Boating in Pennsylvania, Pennsylvania Fish Commission, 64 p.

4. Minutes of the Second Meeting of the Juniata River Basin Water Use Task Group, Chesapeake Bay-Susquehanna River Basins Project, April 23, 1965.